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DISCUSSION OF PRIOR ART

For centuries hand cut stone has been used in architecture to add enduring beauty and elegance. Architectural cast stone is an affordable and durable alternative to natural stone, and can be molded to look like hand cut stone. Modern molding techniques can substantially eliminate unwanted air voids in cast stone products, and the color and finish of cast stone can be selected to match (or to contrast with) adjacent architectural features, including aged and/or weathered features.

For example, Austin, U.S. 6,113,995, teaches a process for creating multicolor designs and patterns in cast stone products so that they imitate natural stone in appearance. The process includes the steps of preparing multiple colors of the casting material, geometrically loading these colors in a three dimensional array in a holding container according to formulas corresponding to particular patterns to be created, placing the geometrically loaded colors into a mold by means which include pouring, extruding and spraying, consolidating the mixtures in the mold and allowing them to set, and removing the cast structure from the mold followed by polishing and sealing if required. A removable matrix in the holding container provides the ability to reliably repeat patterns according to the loading formulas.

Sheahan et al., U.S. 5,787,667, teaches a casting that has a surface appearance simulating carved stone, and is especially adapted for use as a transition between a brick or stone wall and window and door openings. Further, it provides architectural detail to building constructions, especially as a surround for window and door openings. The casting is produced from a mixture of graded aggregates and a resin binder, combined in

predetermined proportions to make a soupy mixture that is cast in a mold. The mold is vibrated to cause migration of air bubbles away from the surface of the molded product, and to cause realignment and orientation of the aggregate materials in a way to enhance the structure and surface density of the product. After the casting has set, it is removed from the mold and cured and the surface is sandblasted to erode away some of the resin binder and portions of the aggregate at the surface to produce an appearance that is an accurate simulation of carved stone. The cast product, when used as a trim component for architectural detail in building construction, may have shaped portions to accommodate straight runs of brick or stone work, minimizing the need for cutting or shaping the bricks or stones to fit around the casting.

Stott, U.S. 6,355,193, teaches a method for making a faux stone concrete panel. A wall has a thin concrete layer with a cross-sectional contour having protrusions and indentations forming other objects, such as stone work, brick or wood. A reinforcement layer may be affixed to the concrete layer to provide tensile strength and impact resistance to the concrete layer. A foam layer is affixed to the reinforcement layer to further reinforce the concrete layer, and so that the wall or panel is light weight. A second concrete layer or a rigid backing layer may be disposed opposite the concrete layer so that the foam is disposed therebetween. A method for forming the wall or panel includes spraying the concrete onto a mold surface which has indentations and protrusions for forming the other objects. The reinforcement layer is sprayed onto the cured concrete layer. The mold is closed and foam is introduced into the mold.

Sheahan, U.S. 6,054,080, teaches a casting that has a surface appearance simulating carved stone, and is especially adapted for use as a transition between a brick or stone wall and window and door openings. The casting provides architectural detail to building constructions, especially as a surround for window and door openings. The casting is produced from a mixture of graded aggregates and a resin binder, combined in predetermined proportions to make a soupy mixture that is cast in a mold. The mold is vibrated to cause migration of air bubbles away from the surface of the molded product, and to cause realignment and orientation of the aggregate materials in a way to enhance

the structure and surface density of the product. After the casting has set, it is removed from the mold and cured and the surface is sandblasted to erode away some of the resin binder and portions of the aggregate at the surface to produce an appearance that is an accurate simulation of carved stone. The cast product, when used as a trim component for architectural detail in building construction, may have shaped portions to accommodate straight runs of brick or stone work, minimizing the need for cutting or shaping the bricks or stones to fit around the casting.

Ferguson, U.S. 6,599,452, teaches a method for manufacturing molded simulated stone architectural articles for buildings. The method incorporates a unique mold assembly including a resilient silicone rubber mold supported within a rigid mold cradle/foundation, and a vented lid having a High-Density Polyethylene (HDPE) interior surface. The silicone rubber mold is initially treated with a liquid polyester gel coating that is cured and then coated with an acrylic/vinyl ester back coating. Once the back coating is cured, a predetermined volume of a modified high-density, natural mineral fiber-reinforced, 2-component hybrid polyurethane liquid expanding composition is dispensed therein and the mold is covered with the vented lid. The system is pressurized and heated to produce a molecularly-fused, lightweight rigid article having the desired architectural shape.

While various architectural shapes and embellishments can be readily made using cast stone, it is time consuming and difficult to select the specific shapes, sizes, and features of an architectural embellishment. It is also difficult to correlate this information with mold design and/or selection. Finally, it would be useful to be able to readily incorporate

this information into graphic form, to facilitate the work of the architect.

The present invention provides a system and method for meeting these and other long felt needs.

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Signed: _____
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